भारतीय मानक
Indian Standard

IS 16688 : 2017

प्राकृतिक रबड़ पेल लैटेक्स क्रेप — विशिष्टि

Natural Rubber Pale Latex Crepe — Specification

ICS 83.040.10

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Rubber and Rubber Products Sectional Committee, PCD 13

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by theRubber and Rubber Products Sectional Committee had been approved by the Petroleum, Coal and Related ProductsDivision Council.

Major source of natural rubber (NR) is *Hevea brasiliensis* and is obtained from the tree in the form of latex. The physical state of NR latex is colloid and the rubber contained in it is cis poly isoprene. Alternate source of NR latex, though minor in quantity at present is guayule. Marketable forms of natural rubber are:

1. sheet rubber
2. crepe rubber
3. block rubber
4. preserved field latex
5. concentrated latex

i, ii &iii are solid forms and iv & v are liquid forms. Crepe rubber comprises of pale latex crepe (PLC), estate brown crepe (EBC), and few other minor forms. PLC is made by fractional coagulation of field latex and/or bleaching of NR latex followed by coagulation. The coagulum is processed into crepe form and dried in air. Currently PLC is the highest value added form of processed natural rubber in the solid state .Conventionally, PLC is graded by visual examination ,following the forms given in International Standards of Quality and Packing for Natural Rubber Grades, popularly known as “The Green Book”. Assessing the quality of a rubber just by visual examination need not be accurate always. To overcome the situation, it is decided to fix a set of technical parameters and accordingly this Indian Standard is evolved. In line with Green Book, this standard prescribes four different grades of PLC, viz PLC IX,PLC1,PLC2 and PLC3.Major areas where PLC is used are food contact applications, pharmaceuticals, infant toys and high quality colored industrial products.

In reporting the results of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 1960 ‘ Rules for rounding off numerical values *(revised)’*.

Indian Standard

NATURAL RUBBER PALE LATEX CREPE — SPECIFICATION

1 SCOPE

1.1 This standard prescribes requirements for pale latex crepe (PLC) rubber, processed out of natural rubber latex.

2 REFERENCES

The following Indian Standards contain provisions which, through reference in this text, constitute the provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on the standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	*Title*
IS 3660 (Part1) : 1999	Methods of test for Natural Rubber: Determination of dirt (NR-1) (*third revision*)
(Part 2) : 1985	Determination of volatile matter (NR:2) (*second revision*)
(Part 10) : 2000	Part 10 Determination of Nitrogen content (NR 11) (*first revision*)
(Part 11) : 1989	Determination of Plasticity (NR:12) (*first revision*)
(Part12) : 2017/ ISO 2930 : 2009	Determination of plasticity retention. index (PRI) (NR 13) (*first revision*)
(Part 13) : 1997	Part 13 determination of colour (NR 14) (*first revision*)
3708 (Part 9) : 2005/ISO 247 : 1990	Methods of test for natural rubber latex Part 9 Determination of total ash
IS 5599 : 1999	Rubber, raw, natural and synthetic — Methods of sampling and sample preparation (*first revision*)

3 GRADES

3.1 Pale latex crepe (PLC) rubber shall be of the following grades:

a) PLC 1X
b) PLC 1
c) PLC 2
d) PLC 3

4 REQUIREMENTS

4.1 Description

Pale latex crepe shall be processed out of natural rubber latex. The material shall be free from evident mould growth and any oil contamination.

4.2 The material shall also comply with the requirements given in Table 1.

5 PACKING

5.1 Each bale of PLC shall be 25kg or 50 kg or as agreed between buyer and seller. No powder shall be applied in the bales during packing.

5.2 The material shall be packed in polyethylene sheets and further wrapped outside, as agreed between the manufacturer and the purchaser.

6 MARKING

6.1 Marking shall be as follows:

a) Name of the Manufacturer and trade mark, if any,
b) Batch No./Lot No.
c) Bale number

Table 1 Requirements for Pale Latex Crepe Rubber
(*Clause* 4.2)

Sl No.	**Characteristics**	**Requirements for**				**Method of test, Ref To**
		PLC 1X	PLC 1	PLC 2	PLC 3	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Dirt content, percent by mass, *Max*	0.01	0.01	0.02	0.03	IS 3660 (Part 1)
ii)	Volatile matter content, percent by mass, *Max*	0.60	0.60	0.60	0.60	IS 3660 (Part 2)
iii)	Ash content, percent by mass, *Max*	0.50	0.50	0.60	0.70	IS 3708 (Part 9)
iv)	Nitrogen content, percent by mass, *Max*	0.60	0.60	0.60	0.60	IS 3660 (Part 10)
v)	Initial Plasticity (PO), *Min*	30	30	30	30	IS 3660 (Part 11)
vi)	Plasticity Retention Index (PRI), *Min*	70	70	60	50	IS3660 (Part 12)
vii)	Colour, Lovibond scale, *Max.*	3.0	4.0	5.0	6.0	IS 3660 (Part 13)

d) Month and year of manufacture
e) Type/grade
f) Net weight in kg

6.2 *BIS Certification Marking*

6.2.1 Product may also be marked with the Standard Mark.

6.2.2 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7 SAMPLING AND CRITERIAL FOR CONFORMITY

7.1 For ascertaining the conformity of a consignment of PLC to this specification, the scale of sampling and criteria for conformity shall be as prescribed in IS 5599.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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